

### **REMARKS**

Claims 1 and 9-24 are pending. Claim 8 has been canceled. Claims 11-24 are withdrawn from consideration.

Claims 1-7, 9-10 and 24 have been amended to delete the term "multiple" for clarity.

Claim 1 has also been amended to recite the subject matter of canceled claim 8 and the subject matter of paragraph [0065].

Claim 6 has been amended to recite the subject matter of [0014] and [0028].

No new matter has been added by way of the above-amendment.

### **I. Priority Documents**

The Examiner will note that the instant application claims priority to Japanese Application No. 2003-400821 filed November 28, 2003 in Japan. However, the Examiner has not acknowledged receipt of a copy of the certified copy of the priority document from the national stage application from the International Bureau in accordance with PCT Rule 17.2(a).

Applicants respectfully request that the Examiner acknowledges receipt of a copy of the certified copy of the priority document from the International Bureau.

### **II. Election/Restriction**

The Examiner has imposed a lack of unity of invention and has required an election as between:

Group I, claim 1-10, drawn to Multiple Particle;

Group II, claim 11-24, drawn to Composition having dispersed system.

Applicants confirm the election of Group I, claims 1-10 with traverse.

The Examiner alleges that there is no special technical feature since the instant multiple particle is known in the art, i.e., JP 2003-34725.

Applicants respectfully submit that the determination of a special technical feature in the claims is not solely made before prosecution begins and that the special technical feature can be added during prosecution by amendment. Should Applicants amend claims to recite features not described in the prior art references, then these features should be considered when considering unity of invention throughout prosecution.

Furthermore, Applicants respectfully submit that if the search and examination of an entire application can be made without a serious burden, the Examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions. In view of: i) the likelihood that a significant portion of the patents found in the search of Group I would also be found in the search for Group II; and ii) the fact that the computer searching software used by the Examiner enables the Examiner to combine the search for patents in multiple subclasses without having to view duplicates, the search of the subject matter of Group II would not amount to an undue burden on the Examiner to consider all of claims 1-24. As such, Applicants respectfully request that the Examiner rejoins Group II with Group I.

### **III. Issues Under 35 U.S.C. § 112, Second Paragraph**

Claims 1-10 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully traverse the rejection.

Specifically, the Examiner objects to the term "Multiple particle." The Examiner has taken the position that one particle cannot be multiple. In response, Applicants have amended claims 1-10 by replacing the phrase "a multiple particle" with the phrase "a particle." In view of the foregoing, Applicants respectfully submit that the claims, as currently amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully request withdrawal of the rejection.

#### **IV. Issues Under 35 U.S.C. § 102**

Claims 1-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shigemori et al. ("Shigemori"), US Pre-Grant Publication No. 2003/0049559. Applicants respectfully traverse this rejection.

##### *IV-A Teachings of Shigemori:*

Shigemori relates to methods of producing toners ([0001]) and discloses that colored particles to be used in the invention comprise at least a binder resin, a colorant and a charge control agent, and may optionally comprise other additives such as a parting agent and a magnetic material ([0019]).

Shigemori discloses that examples of binder resins include polymers of styrene and substituted styrene; copolymers of styrene such as a styrene-maleic acid copolymer, and a styrene-maleic acid ester copolymer; and, further, a poly-methyl methacrylate, polyethylene, a polypropylene, a polyester, a polyamide, an epoxy resin, polyvinyl butyral, and the like, and that these resins can be used either alone or in any combination thereof ([0020]).

As the parting agent, waxes such as low molecular weight polyolefin waxes are exemplified ([0031]).

Shigemori also discloses that as a method for obtaining the core-shell type colored particles, for example, an in-situ polymerization method can be adopted ([0035]).

Shigemori also discloses in the Examples as follows:

"polymerizable monomer composition for a core was added to said dispersion liquid of the magnesium hydroxide colloid and agitated ... . To the resultant mixture, added was ... t-butyl peroxy-2-ethylhexanoate ... as a polymerization initiator to obtain a mixture. ... thus-prepared dispersion liquid of the obtained monomer mixture was provided into a reactor ... , heated ... to allow it to be polymerized. ... to a vessel containing the resultant polymerized mixture, provided was a mixture obtained by dissolving 0.3 part of 2,2'-azobis(2-methyl-N-(2-hydroxyethyl)-propionamide) ... as a water-soluble polymerization initiator

in an aqueous dispersion liquid of said polymerizable monomer for a shell. The mixture in the vessel was agitated to allow said polymerizable monomer for a shell to be polymerized continuously for 4 hours and, then, the reaction was terminated to obtain a dispersion liquid A of unrefined colored particles.”  
([0154])

As discussed in detail below, Shigemori does not teach or fairly suggest the presently claimed invention.

*IV-B Comparison of the present invention and Shigemori:*

As the Examiner will note, the description of the particle of inventive claim 1 has been amended to recite that the organic solid component (A) is not formed by seed polymerization using an addition-polymerization polymer to further distinguish the present invention from the teachings of Shigemori.

The present invention includes a dispersion composition containing the organic solid component (A) (particularly a polymer) or particle comprising the organic solid component (A) (polymer). The present inventors have surprisingly found a way to obtain a dispersion composition or polymer particle independent of the kinds of polymerization methods needed to obtain the polymer. Since Shigemori's teachings (in combination with that which is known in the art) are limited to the formation of a polymer particle (having a core-shell structure) which can be obtained by addition polymerization (seed or emulsion polymerization) of a radically-polymerizable monomer. Accordingly, it was most appropriate to simply cut the teachings of Shigemori right out of the instant claims with a negative limitation (which has support in the present specification) by reciting that the organic solid component (A) is not formed by seed polymerization using an addition-polymerization polymer. Particularly, the polymer particle (e.g., a polymer particle having a core-shell structure) of the present invention can be obtained even then a non-addition polymerization polymer (such as condensation-series polymerization polymer) is utilized.

Furthermore, Applicants note that the Examiner mentions “Shigemori discloses ... particles comprises one or more of thermoplastic polymers ... as styrenic resins, including

copolymer with maleic acid polyester or/and polyimide or their mixture, and represent hydrophobic polymers, with functional groups ... and other solid organic materials as low molecular weight waxes ... , represent hydrophobic polymers.”

However, as apparent from the Examples of Shigemori, Shigemori substantially discloses only a seed or emulsion polymerizations. Moreover, according to Shigemori, both of the polymer for the core and the polymer for the shell were obtained by emulsion polymerization. Thus, the monomers for forming both of cores and shells need emulsion-formability in a solvent such as water. In this way, since the emulsion polymerization requires a reaction in a solvent and monomers employed for the emulsion polymerization must have ability for forming an emulsion, the kinds of monomers usable for the seed or emulsion polymerizations are exceedingly restricted (i.e., restricted to a radical polymerizable monomer (or radical polymerization polymer)) (see the present specification at paragraph [0007]). Particularly, it is difficult to form a particle (e.g., a particle having a core/shell structure) by the seed or emulsion polymerizations with use of a plurality of monomers different in hydrophilic property of the polymers thereof (i.e., with use of the specific combination of a hydrophobic polymer and a hydrophilic polymer which has a hydrophilic group). Thus, Shigemori does not concern itself with the hydrophilic property of polymers nor the concept of combining the hydrophilic polymer and the hydrophobic polymer.

As described above, it can be concluded that Shigemori fails to disclose or suggest the specific combination of the hydrophobic and hydrophilic polymers having specific affinities relative to the water-soluble auxiliary component (B), which are different from each other. Therefore, the present invention is different and would never be predicted from Shigemori.

Further, the present invention shows unexpected results. That is, since Shigemori prepares colored particles by a conventional emulsion polymerization method, the kinds of the polymers to be used for the particles are considered limited to addition polymerization polymers.

In contrast, according to the present invention, various kinds of polymers or resins can be employed for obtaining resin particles. Particularly, resin particles can be obtained by using

even condensation-series polymers or monomers thereof. In the present invention, the hydrophobic and hydrophilic polymers having the specific affinities to the water-soluble auxiliary component are combined, and as such, polymer particles can be simply or conveniently obtained by using various polymers independent of the kind of polymerization method thereof. Moreover, even when the particle size is large, the particle having a core-shell structure can be stably produced by the present invention. Further, the present invention ensures a narrow particle size distribution and control over the size of the polymer particle, and also the present invention ensures the formation of a substantially spherical particle.

Based on the foregoing, significant patentable distinctions exist between the present invention and the teachings of Shigemori. As such, withdrawal of the rejection is respectfully requested.

#### **V. Double Patenting**

The Examiner has imposed the following two obviousness-type double patenting rejections:

Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-28 of copending Application No. 10/515,420 (the '420 application); and

Claims 1-24 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/580,605 (the '605 application).

Applicants respectfully traverse the provisional rejections.

Applicants respectfully submit that in view of the above-amendment to the claims, the instantly claimed invention is not obvious over the claims of the '420 application or the claims of the '605 application. It is noted that none of the claims of the '420 application and the '605 application recite that the organic solid component (A) comprises the instantly claims:

a hydrophobic polymer (A1), and  
a hydrophilic polymer (A2) having at least one hydrophilic group selected from the group consisting of a hydroxyl group, a carboxyl group, an amino group, an imino group, an ether group, an oxyalkylene group, an ester group and an amide group.

Should the Examiner maintain that the instantly claimed invention is obvious over the claims of the '420 application and the '605 application, the Examiner must look to a prior art reference to cure this deficiency. It is improper for the Examiner to look to the instant specification to cure the deficiencies in claims when considering obviousness-type double patenting. See MPEP 804.

As such, withdrawal of the provisional rejections is respectfully requested.

In view of the above amendment, Applicants believe the pending application is in condition for allowance.

#### Conclusion

In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq., Reg. No. 43,575 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/580,652  
Amendment dated August 3, 2007  
Reply to Office Action of April 3, 2007

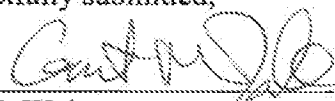
Docket No.: 2224-0260PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: August 3, 2007

Respectfully submitted,

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